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BABY'S



FIRST MONTH

"In every work the beginning is the most important part, especially in dealing with anything young and tender."—**SOCRATES.**

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. . Compliments . .

W. JENKINS, 850 Cumberland Street, Dunedin, New Zealand.

HON. FOREIGN CORRESPONDENT

N.Z. SOCIETY FOR THE HEALTH OF WOMEN & CHILDREN

Member of American Association for Study and Prevention of Infant Mortality.

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Baby's First Month.

HINTS TO FATHERS AND MOTHERS.

By F. TRUBY KING,

M B , C.M., B.Sc. (Public Health), Edin ; Ettles Scholar ; Lecturer
on Mental Diseases, University of Otago ; President of the
Society for the Health of Women and Children.



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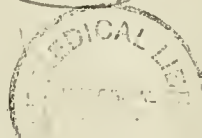
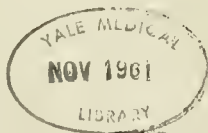
1913

NOTICE.

FOR the first few weeks of life the baby is generally under the care of a registered nurse, but this is not always possible; and in any case **it is the duty of both parents to make themselves quite conversant with the essential needs of mother and child** so as to ensure that no serious mistakes are made.

This pamphlet is intended to serve as a guide for the first month after childbirth. However, Parents are advised to procure in addition the book "**Feeding and Care of Baby,**" about to be issued by the Society for the Health of Women and Children, which deals simply and fully with the needs of Mother and Child, not only before and after childbirth but also throughout the first few years of infancy. If this book is not yet procurable, the main essentials will be found summarized in the pamphlet "**What Baby Needs,**" issued by the same Society.

If there is a Plunket Nurse living in the district, or visiting it from time to time, Expectant and Nursing Mothers are strongly advised to get into touch with her, either by direct application, or through the Secretary of the local branch of the Society for the Health of Women and Children. **The Nurse's services are available, free,** for help and reliable friendly guidance and teaching in the various simple practical matters that make for health in the home—especially the health and fitness of Mother and Child.



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Baby's First Month.

RESPONSIBILITY OF FATHER, MOTHER. AND NURSE.

THE child is practically made or marred in the first twelve months of life, and steady uninterrupted progress in the first month largely determines what follows.

Nearly every baby is born healthy, yet few are as strong and well as they should be at the end of a month or two.

This falling-off can easily be prevented. Babies don't make themselves delicate and sickly—they become so through faulty treatment.

The Parents and the Nurse are almost entirely responsible. The baby's fate is in their hands. They can make the child either a success or a failure. What must they do, and what must they not do?

Suckling by the mother is safest and best for the baby, and best for the mother's health also.

Failure of the mother's health and strength therefore tends to failure of the baby, so our first care must be to safeguard the mother. How can this be done?

SAFEGUARDING THE MOTHER.

After childbirth the best way to fit the mother for the perfect and complete nursing of her baby, and to prepare her for resuming the ordinary cares of family life is to make sure she has freedom from worries and a sufficient period of peaceful contented rest—reclining or sitting in the open air as soon as she is fit, and then stage by stage proceeding to tone up the whole system by suitable bracing and exercise.

There are few husbands in the Dominion who would not manage to ensure their wives full time and opportunity for proper recuperation if they only realized the enormous difference it would make to the future of both mother and child.

From a monetary standpoint, any expenditure incurred would prove a great economy in the long run, because **nothing is so wasteful and extravagantly expensive in the home as allowing the mother to just drag herself along and struggle against chronic weakness and ill-health.**

The prevailing custom among civilized peoples has been to keep the mother coddled in bed too long after the birth of her child. This is debilitating, not beneficial, unless there is some special reason for invalidism. The fact that the mother tends to set to work directly she is allowed up is not sufficient ground for keeping her invalided. Lying passively in bed for ten days does not fortify the system for the battle of life. The aim should be to promote the tone and fitness of the whole body, so that good digestion and active circulation may lay the foundations of a normal healthy milk-supply, and favour the proper bracing-up and contraction of the womb and other enlarged and congested internal organs.

Of course there may be grounds (such as high temperature, &c.) known to the Doctor or Nurse, which would render the course recommended inadvisable; but,

generally speaking, cool-sponging (beginning with the limbs and breasts), followed by active rubbing with a rough towel, may be commenced towards the end of the week, and an hour or so may then be spent comfortably reclining in the open air.

The outing and stimulation should be increased day by day; and when baby is a fortnight old, the average mother, besides being braced by daily cold sponging of the whole body followed by brisk friction and exercise, should be spending almost all day long in the open air, and should be taking and enjoying, say, a mile of fairly active walking, not mere sauntering.

On the other hand, for the first month the mother should be careful not to lift heavy weights, or strain herself in any way; and, if possible, she should be spared not only the work, but the worries and responsibilities of the household.

The special and distressing “**Displacements**” which afflict married women, and often cause life-long weakness and misery, are mainly induced by the habit of wearing corsets and tight waist-bands, and by failure to suckle the baby, coupled with not establishing proper muscular tone in the first few weeks following childbirth. **If husbands only knew the truth they would safeguard their wives at any cost—they would not let them sacrifice themselves, and, indeed, the whole family, by setting to work too soon.**

If a month of proper attention and consideration could be insured for all mothers, there would be a far higher standard of health and happiness in our homes. Unfortunately, many women are forced to set to work nowadays within the first fortnight, often with deplorable consequences to themselves and their offspring. This cannot be too strongly condemned. If the “**Monthly Nurse**” cannot be retained, there should always be at least some maid, grandmother, or other helper to do a portion of the domestic work until the end of the first month—preferably, of course, longer.

THE NURSING MOTHER.

Food and Drink.—The tendency is to overfeed rather than underfeed the nursing mother. This is specially liable to be the case in the early stages, when she is lying in bed—the natural consequences being Indigestion, Constipation, and Headache. If the bowels have not moved towards the close of the second day she should have a dose of castor-oil.

For the first two or three days the mother should be given light milk diet, which may include milk puddings, toast, bread and butter, some fruit and vegetables, and, say, on the third day, a little fish or chicken.

In general, three regular meals daily of simple, digestible, appetizing food, including fruit and vegetables, are best—no food being allowed between times. Thorough chewing of food is most important: meals should be enjoyed, and should on no account be hurried.

The special dietetic need of the nursing mother is extra fluid, best given in the form of plain water—say, a glass on rising, another at bedtime, and a glass between meals. During the first month the mother should have about a pint and a half more fluid than she would ordinarily take. If tea is used it should be very weak. Milk, being a food, should not be taken between, but at the end of meals. The use of milk in moderation promotes the secretion of milk: a pint in the twenty-four hours (made up to a pint and a half with water, or taken with cocoa, &c.) is a fair allowance.

A leading authority says:—

Nursing women tend to eat too much. This is especially harmful during the lying-in period.

They are encouraged to stuff, and stuffing brings on indigestion. Tell the patient to keep her bowels regular by drinking plenty of fluid, eating fruit and vegetables, and, if neces-

sary, by mild doses of cascara or other non-irritating laxative. We know the popular objection to fruits and green vegetables, but we have never found any bad results from their use. (Mothers are often advised not to take cabbage, turnips, &c., but these vegetables agree quite well with many women.)

If milk is lacking, more fluid may be needed. **There is a popular fallacy that milk given to the mother comes out as milk in her breast. This leads to the mother drinking milk between her meals, which takes away her appetite and gives her indigestion.**

Defective supply and inferior quality of mother's milk is generally due more to indigestion and constipation than to careless feeding, though diet is generally at fault also. Too much meat should not be taken. Pastry, rich cakes, strongly spiced, fried, overfatty, overcooked, twice-cooked, or other indigestible food should be avoided; also beer, stout, wine, spirits, and all such drinks. (For further details, see the book "Feeding and Care of Baby," or "What Baby Needs.")

It is impossible to lay down a fixed diet applicable in the case of all nursing mothers, because **the first essential is that no unnecessary changes or restrictions should be made.** Assuming that her ordinary diet has been reasonably wholesome and nutritious, the mother should continue on the same lines, merely avoiding anything known to be specially indigestible, or which she has previously found to disagree with herself. One of the worst things that the nursing mother can do is to change to a faddy, meagre diet, consisting largely of insipid, sloppy food. She needs good nutritious feeding—the meals being sufficiently tasty and varied to be appetizing and enjoyable.

Pure Air, Outing, and Exercise.—No mother has given herself or her baby a fair chance unless she has tried the effect of being out in the sunshine as much as her

circumstances permit, besides keeping the windows open day and night. Pure air and sunshine have almost as much effect on the health and strength of both mother and child as good food, and no woman can be in her best form as a mother who neglects to take regular open-air exercise.

Regularity of Bowels.—It is a matter of supreme importance that the mother's bowels should move regularly and easily once a day. Absolute regularity at the same time every day should be brought about by attention to daily out-door exercise, stimulation of the skin by cold bathing or sponging, suitable food (including fruit, vegetables, porridge, brown bread, &c.), and a sufficiency of fluid (see above). Don't take purgatives, but a mild laxative such as cascara, taken regularly in small doses, may be needed for a time. Consult a Doctor.

CARE OF THE BREASTS AND SUCKLING.

The expectant mother should always pay attention to toughening, and if necessary drawing out and forming the nipples between the fingers for some months before childbirth. Such applications as spirit, or Boracic lotion, are sometimes recommended; but, in general, **cleansing with boiled water, followed by perfect drying, is the main essential—especially for the nursing mother—along with scrupulous cleanliness as to the breast coverings.**

The breasts should be entirely free from pressure by clothing. Before nursing squeeze out a drop or two of milk, and cleanse the nipples with boiled water. After nursing cleanse the parts again with boiled water, dry thoroughly, and cover with a perfectly clean piece of soft, old linen, or preferably "Sterile gauze" or Gamgee-tissue, obtainable from a chemist's. The simplest plan is to pin the material to the garment worn next the skin. If this is carefully attended to there will be little risk of painful cracks or sores forming.

Painful cracks and fissures of the nipples are nearly always due to want of care and cleanliness. Nipples that are not at once washed and dried, but allowed to remain damp after nursing—especially during the first week—are very liable to become softened and cracked. Further, where the milk “leaks,” and is allowed to soil the clothing, it “goes bad,” and tends to cause both cracking and poisoning.

Another frequent source of soft, painful, or cracked nipples is allowing baby to dawdle too long at each suckling in the early lying-in days; and, worst of all, letting the baby go to sleep with the nipple in his mouth.

Cracked nipples and “leaking nipples” (whether cracked or not) should never be neglected. In such cases it is a wise precaution to cleanse the breasts, after nursing, with Boracic lotion (made by dissolving a level tablespoon-full of Boracic Acid in a pint of Boiling Water) instead of using plain boiled water; but, where this is done, special care must be taken to cleanse away the Boracic Acid with warm boiled water before the next suckling.

Directly any crack or fissure is noticed a slight smear of Friar’s Balsam may be applied with a tiny piece of clean soft rag or cotton wool. This should be done after each nursing as soon as the proper cleansing and drying of the breasts has been attended to, and at least one application should be made during the night. Further, it is always advisable to try to safeguard very tender, painful, or cracked nipples by getting the baby to suck through a nipple-shield (see “Nipple-shield,” page 10, and illustration) for the time being. Where such precautions are taken, slight fissures heal up in the course of a day or so.

Dabbing with spirit and water after each cleansing is beneficial where the nipples tend to be unduly soft and spongy; this applies also to leaking nipples.

The nipples may leak, although the supply of milk is quite deficient. In all cases of leaking, the mother must

improve her general health by fresh air day and night, outing, exercise, &c., and she should brace up the breasts by bathing and massaging them morning and evening, using hot, followed by cold, water. Further, she should not have too much warm covering over the breasts.

Abscess of the breast is nearly always due to uncleanness, dampness of nipples, and cracking; and even where abscess does not result, cracks cause much pain, upset the mother, and may stop her milk-supply. This easily avoidable trouble is a main cause of women giving up nursing.

If cracks or fissures do not quickly heal with the simple attention described, a Doctor should always be consulted. This is specially the case where fissures are deep or very painful, because under appropriate special treatment healing is hastened and pain can be relieved.

Nipple-shield.—A shield (see illustration) may have to be used for some time where cracks are deep or painful. If the baby wont suck the nipple of the shield tempt him by squeezing a little breast-milk into the shield, and wetting the surface of the artificial nipple with the milk. Scrub the shield, before and after use, with soap and water, and boil it once a day.

Breast - pump.—This contrivance (see illustration) is commonly used where for any reason suction by a baby is not available, or where it is necessary to suddenly stop suckling either temporarily or permanently. It should be understood that no artificial device will empty the breasts at all completely.

Manipulation.—By skilled manipulation a competent nurse can often coax out the milk to a great extent. She does this by gently pressing and squeezing the region of the nipple and the dark circle around it with slightly oiled fingers, carefully avoiding cracks and fissures. She next lifts and draws the whole breast forwards and downwards, squeezes the organ very lightly between her hands and strokes it gently with fingers dipped in warm oil, moving her fingers from the base towards the nipple; then she lets the breast slip back

again. These movements, skilfully repeated again and again, are often more effective than a breast-pump, but the pump needs less skill. The combined use of pumping and manipulation acts best. However, in any case the human breasts are quite different from the udder of the cow: neither by shields, pumps, nor handling can the mother's breast be properly emptied—it can only be relieved. This is shown by the fact that a strong-sucking baby put to the breasts after the milk has been nominally drawn off by pumping and manipulating will sometimes manage to get a fair feed.

Engorgement and Caking of the Breasts.—In the first week the breasts are specially liable to become congested and engorged with milk, due, as a rule, to the milk-tubes being more or less blocked at the start, and to the fact that a baby generally takes very little until after the third or fourth day, though active secretion of milk has set in. Sometimes the breasts continue to make more than sufficient for one child, but as a rule the tendency is only temporary, and, if the mother is carefully and sensibly tided over the first week, all goes well.

Within a few days of childbirth the breasts should begin to get under way in the making of milk. The manufacture often starts almost suddenly, and the mother may become a little feverish and headachy. At this time the breasts tend to swell, throb, and become more or less hot, tender, hard, and knotty, especially if the milk does not come away freely, owing to poor sucking or imperfect clearing of the milk-tubes. Great relief is afforded by supporting the breasts with ready-made “breast-supports,” or with a “breast-binder,” or by bandaging more or less firmly with butter-muslin.

If this does not suffice—the breasts becoming harder and more painful, and the milk failing to flow in spite of regular putting of baby to the breast and the use of gentle manipulation, &c.—the bowels should be freely opened, and hot fomentations, renewed every two hours,

should be applied for twenty-four hours, or longer if necessary. The nipples and the dark circle around them should not be covered by the fomentations. The moist heat generally affords great relief, and with the aid of the other measures, usually causes the milk to come away more freely; then the breasts soften, and the mother becomes comfortable—especially if the baby sucks well.

In the absence of a breast-pump a good simple substitute is afforded by heating a soda-water bottle with hot water, then moistening the rim with glycerine and water, and applying it gently but firmly over the nipple. As it cools it will exercise suction (see illustration).

The knots or hard portions of breasts tending to "cake" can be readily softened as a rule by gently working at the lumps or nodules directly they begin to form, stroking them from the base towards the nipples, using warmed oil, but if this is not done gently, abscess may result.

Where the breasts continue overfull, heavy and dragging, they should be comfortably supported by ready-made "breast-supports," obtainable at the drapers; or by muslin bandaging.

Temporary over-secretion of milk tends to be relieved by firm bandaging applied over cotton-wool, in which openings can be made for the nipples, so as to permit of suckling without inconveniencing the mother at each nursing. Where this has to be done, any portion of the cotton-wool that becomes wet and soiled must be promptly removed. The taking of less fluid and keeping the bowels free with Epsom Salts also helps to lessen the milk-supply. However, in all such cases a Doctor should be called in if the condition persists, because the taking of Purgatives should never be continued, and it is injurious to keep the breasts warmly muffled or pressed on for any length of time.

Position and Precaution while Nursing.—The mother should be in as comfortable a position as possible when

A.



B.



C.

A. **USE OF SODA-WATER BOTTLE**, as described opposite. See the milk lying in the shoulder of the bottle. A small wineglassful was drawn off in four minutes, with the one application, causing the mother no discomfort. Note the right hand of the nurse using gentle manipulation of the breast, to assist the suction.

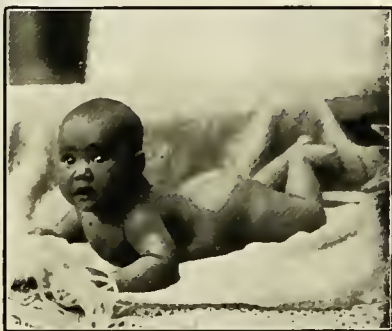
B. **BREAST-PUMP** (see page 10). Squeeze the india-rubber bulb and then apply the glass mouth of the pump, moistened with glycerine and water, over the nipple, keeping the glass bulb directed downwards, so that the milk may flow into it as the india-rubber bulb slowly expands. At the same time use gentle manipulation.

C. **NIPPLE-SHIELD** (see page 10). In this case the suction is effected by the baby.

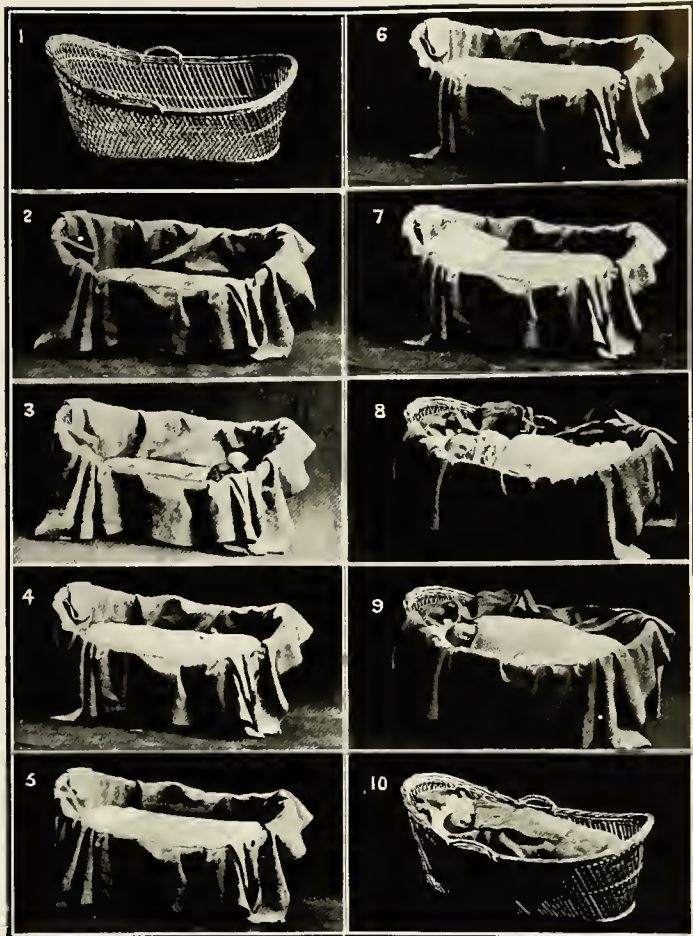
D.



E.



D, E. Healthy, bright, happy babies of our two representative races. Both were entirely breast-fed. The Maori when photographed, though only five months old, weighed 16 lb. The white baby, who was a month or so older, weighed a little over the average. He was entirely breast-fed, never had more than six feedings in the twenty-four hours, never had any night-feeding, and always slept out on a balcony from the time when he was a few days old. Such babies as these give no trouble, are a joy in the home, rarely become ill, and, if they do get anything wrong with them, soon throw it off.



MAKING BABY'S BED (see pages 14 and 15).

- (1.) Wicker cradle.
- (2.) Soft woolly blanket thrown over cradle (a grey blanket was used to contrast with the white bed-clothing for the purpose of photographing). Mattress placed on blanket.
- (3.) Hot bottle in position. For young babies a hot bottle is advisable, especially in very cold weather. If placed as shown it will keep up a steady mild warmth without risk of overheating or burning.
- (4.) Loose chaff "shakedown," into which the baby comfortably nestles. It is easily changed and renewed if any soiling takes place.
- (5.) Piece of thin mackintosh sheeting or jaconet laid across "shakedown."
- (6.) Piece of old striped blanket covering mackintosh.
- (7.) Pillow in position.
- (8.) Baby has the old-fashioned very long clothing. Shorter clothes are preferable.
- (9.) Honeycomb shawl tucked round baby.
- (10.) Outside blanket brought across, and the end folded over so as to form an envelope or cosy sleeping-bag, secured by three safety-pins.

nursing. During the first week, when the mother is in bed, the baby should be comfortably supported along one arm, while with the opposite hand the mother takes the nipple between the first and second fingers, puts the teat into the mouth and can easily control the flow, promoting or checking it as needed by manipulating or squeezing the nipple, &c. At the same time she pushes back the surrounding parts of the breast with the other fingers and palm, so as to prevent the baby's nose being pressed on ; **a child cannot suck properly unless there is a perfectly free entry for air to the nose.**

When nursing in the sitting posture, many mothers find a cushion placed across the knees a great advantage as it does away with stooping. Usually women manage fairly comfortably with a very low chair.

ESSENTIALS FOR BABY'S HEALTH.

1. FRESH AIR.

The new-born babe needs special care and attention. For the first few days it is well to have a fire in the bedroom in cold weather ; but, unless for special reasons, this is not advisable after a week or ten days. Even when there is a fire, the room must not be allowed to warm much, but must have a very free flow of pure, cool, outside air through it day and night. See that baby is sufficiently covered with light, open, fluffy or porous woollen materials, and, if necessary, have a hot bottle as well.

Keep baby out of direct draught, but dont be frightened of the air being cool. Pure cool air is invigorating, and prevents "catching cold." Warm, stuffy air is poisonous and devitalizing, and makes babies liable to "catch cold" when taken out into the open.

Keep baby in the open air and sunlight as much as possible. If in a pram, have the hood white outside and preferably green inside. The "Plunket Hood"

is best, as it can be readily adjusted so that whatever way the wind is blowing the air passes freely across above the baby's head, while at the same time the infant is sheltered from direct draught and shaded from the sun.

Baby should always sleep in a cradle by himself—never in his mother's bed. The sooner he can sleep outside on the verandah, or in a well-ventilated room by himself, the better.

Baby's bed must be specially and properly made, as follows.

BABY'S BED.

Place a fluffy, new blanket (not an old one which has shrunk and become thick, heavy, and close) on the bottom of the infant's cradle. On the blanket put the mattress, and then make the bed in the ordinary way, tucking in as usual, but using only as much covering as will be needed when the blanket which goes under the mattress has been brought round and overlapped so as to envelop the whole bed. The blanket should be large enough to completely envelop the bed with at least 6 in. of overlap, and should project at least 12 in. beyond the mattress at the foot end. The overlapping portion should be secured with a few safety-pins. The foot-end must be turned up neatly and pinned across. The baby will then be in a kind of long envelope or sack, and you may put him on the verandah on the coldest day, and he will be quite cosy and comfortable, so long as he is protected from strong direct draught (see illustration).

If necessary, hot-water bottles may be used, but, if so, **the utmost care must be taken not to burn the baby.** The risk of this is very great. It is a good plan to put an india-rubber bottle, well wrapped in flannel or blanket, between a mattress below and a shakedown of chaff covering it (see illustration). This ensures steady, mild, uniform warmth, and not only saves the baby from the possibility of being actually burned, but it also obviates the temporary overheating of the child,

which almost always ensues when the bottle is placed inside the bed.

While it is well to use a hot-water bottle for a time in the case of a delicate infant, a strong healthy baby is generally better without it under ordinary circumstances. The main thing is to make the bed well. For premature babies hot bottles are necessary, but even for them the bed should not be overheated, and uniform continuous heating is best ensured by making the bed as described.

If the bed is properly made there need be no fear of subjecting a young infant to pure cool outside air. It will make him bright, keen for his food, contented and a sound sleeper. He will grow and flourish and his flesh will become firm and hard, if the other essentials for health are also attended to. On the other hand, a baby coddled in a warm, unventilated room will tend to become irritable, sickly, pale, and flabby.

Babies should not be got to sleep by patting, dandling, or rocking. Dont use rocking-chairs or cradles with rockers. A baby who is habituated to being in a bassinette from the start, and never spoiled by being allowed to go to sleep alongside the mother, will be contented and healthy, and will need no dandling, nursing, or rocking to put him off to sleep.

2. FOOD.

Mother's milk is best. The best substitute is Humanized Milk.

Humanized Milk is Cow's Milk modified to make it as like Mother's Milk as possible.

Food should be given regularly, only six times in the twenty-four hours, with three-hourly intervals between feedings during the day, and no food between, say, 9 p.m. and 5 a.m. or 10 p.m. and 6 a.m.

Beware of all forms of Patent Foods, Condensed Milks, Dried Milks, &c.

Water for drinking must be boiled. A little boiled water may be given if baby is thirsty.

3. CLOTHING.

The commonest fault of baby-clothing is that it is too thick, heavy, and hampering. The less the weight of clothing the better, provided it is warm enough; therefore choose light, porous, fluffy flannel or other woollen materials, avoid thick, firm, closely woven or felted fabrics of any kind, and don't use cotton or flannelette.

The main sign of overclothing is sweating: the forehead becomes moist and baby tends to be peevish and fretful.

Clothing should be quite loose round the chest and belly, and there must be nothing to impede free kicking and moving of arms and legs.

After the cord is dressed (see page 21) a silk and wool or soft flannel binder should be applied snugly and comfortably, but not tightly, then clothe next the skin with a silk and wool long-sleeved singlet, to prevent irritation; over this put a soft knitted woollen vest, also with long sleeves; then put on the napkin; then a flannel petticoat, with a flannel bodice; and lastly a light, porous, flannel gown, long enough to cover the feet. If the weather is very cold, a knitted jacket may be added.

It cannot be too strongly impressed on the mother that **whatever touches the infant's skin should be fine soft, and unirritating.** The best available material for this is silk and wool. Next best is some fine soft woollen material. Except for garments touching the skin, cheap common flannel is preferable to the closer, more expensive kinds, being warmer weight for weight, besides being more airy, elastic and altogether healthier.

When taken from his cradle, wrap baby in a loose, soft, fluffy shawl—knitted or honeycombed.

Change all clothes, night and morning.

The Binder should be given up when the navel is healed say, at the end of ten days or a fortnight.

Neither the back nor the abdomen needs any support whatever. A binder may cause rupture, and will not prevent it: on the other hand, it prevents the belly-walls from becoming strong, and always restricts deep healthy breathing, even if lightly applied.

The Napkin.—A pad (see illustration) made of several thicknesses of soft old linen or of wood-wool or Gamgee-tissue should be attached to the napkin, in such a position that it will absorb the urine and prevent it spreading. For a small baby a pad 6 in. square is ample. This pad should be attached to the napkin, not “on the square” but “diamond-wise,” so that one point may come up between the legs, in front, and the other go backwards between the buttocks.

Avoid the bulky, bunched napkins in common use. They are not only irritating, clumsy, and hampering to the child, preventing free kicking, &c., but they tend also to cause bandy-legs.

After removing a wet or soiled napkin, carefully wash and dry the parts before putting on a fresh one. In general, napkins should be changed directly they are noticed to be damp. Mother and Nurse should be on the look out to prevent a child becoming chilled or uncomfortable through lying in a wet napkin. But, if proper absorbent pads are provided (especially for the night time), and if due attention is paid to what is recommended in the next paragraph, no uncomfortable spread of urine should occur in any case, and a normal baby will take no harm from being left “unchanged” from 9 or 10 in the evening until 5 or 6 next morning. However, should he chance to wake up and cry in the night, of course the Nurse would change the napkin at once, if found to be damp. The point to be quite clear about is this: **the mother should not feel herself bound to spoil her night’s rest by waking up at 1 or 2 a.m. merely to change the baby’s napkin.** She should rather take pains before going to bed to ensure that changing will not be

needed. But if the mother should happen to be awake in the early morning, she would naturally take a look at the baby, change the napkin if necessary, straighten the clothing, turn baby on to the other side, and make him generally comfortable.

Dont tuck the gown up under the body to prevent soiling it when baby is in bed. If the napkin-pad proves insufficient, put a fifteen-inch square of one or more thicknesses of soft flannel, backed neatly with a piece of the thinnest waterproof sheeting, inside the gown for the baby to lie on, so that any excess of urine soaking the napkin may be absorbed and prevented from coming through and wetting the gown.

Remember to clothe baby according to the temperature of the day, not according to the date on the calendar. Dont bind up baby like a "trussed chicken" or make bed-clothing so tight that he cannot move freely.

4. BATHING.

The room should be warmed beforehand. Choose a cosy corner, out of the way of draughts. Have everything ready to hand, and bath and dress very quickly. The temperature of the bath should be from 98° to 100° Fahr. Always test with a bath thermometer: dont trust to your hand. Wash all over in the morning, using soap very sparingly, if at all. In the evening wipe the face and hands, and wash the buttocks. Great care should be taken in cleansing and drying the eyes, ears, and all folds or creases of skin, but **the Nurse should not wipe out the mouth.** Thrush and ulcers are caused, and not prevented by this meddlesome routine. The mouth of a toothless babe is kept perfectly cleansed by the natural juices of the mouth. Fingers, rags, and ordinary water are always more or less dirty, even when they are supposed to be clean. Dont introduce dirt and microbes!

When a young baby is taken out of the bath, he should not remain exposed, but should be placed at once

between two warmed towels and dried rapidly by gentle dabbing movements. As baby gets stronger actual rubbing becomes beneficial. Dry carefully, and don't use any dusting-powder. Fuller's Earth is specially objectionable, and sometimes dangerous. If there is any redness or soreness of the buttocks a simple ointment or fresh-boiled lard may be applied.

If baby is ill, or very delicate, forego bath for a day or two, and substitute wiping rapidly with a cloth dipped in warmed oil, or wrung out of warm water. If there is any doubt, "oil-bathing" is the safer.

After the bath, baby is specially liable to chill, and should never be put down before the fire to "toast his toes," as this is the draughtiest place in the room.

5. WARMTH.

Warmed air and surroundings are essential for prematures, and necessary at first for those who have been coddled. Diarrhœa and colds are often due to cold feet and legs, and may be cured by attention to this and other essentials.

Babies, like adults, benefit enormously by pure cold air, if properly clad with a sufficiency of warm fluffy light material. Beware of heroic attempts to "harden" baby, by taking him out of a warm room into cold air, or by reckless exposure of the skin.

Baby's bed should be specially and properly made (see page 14).

6. REGULARITY OF ALL HABITS.

Clocklike regularity of feeding, with intervals of three hours from the beginning of one feeding till the beginning of the next. No night-feeding (see "Food," page 15).

Regularity of bathing, sleeping, &c.

Regularity of action of the bowels.

N.B.—Don't let 10 o'clock in the morning pass without making baby's bowels move, if they have not moved at least once in the previous twenty-four hours. (See "The Bowels," in book "Feeding and Care of Baby.")

7. CLEANLINESS.--CLEANLINESS IN EVERY-THING.

The mother's **nipples** must be kept clean by laving with warm boiled water before and after nursing. If baby has any artificial food, the food and the feeding utensils must be kept scrupulously clean.

Soiled napkins must be removed from the room at once, and washed. Even those slightly wetted should never be merely dried and used again—they must be washed. No soda should be used in washing napkins.

Hands which have come in contact with soiled napkins must be well washed before again handling baby or his food.

THE EYES.

Carefully cleanse the baby's eyelids with warm boiled water and a clean rag. Dont delay—the cleansing must be done directly baby is born. Cleanse freely outside, but do not separate the lids, as this is trying to the child, and tends to wash impurities into the eyes instead of washing them away. Should there be any redness or discharge from the eyes a Doctor should be called in at once. **Never delay an instant, or the result may be blindness.** Dont accept the assurance of Nurse or friend that baby has merely “**caught a cold in the eyes.**”

If the slightest trace of mattery discharge from one eye is carried to the opposite eye, or to the eye of the nurse or mother, it may set up a dangerous inflammation there. Too much care cannot be taken as to fingers, towels, &c.

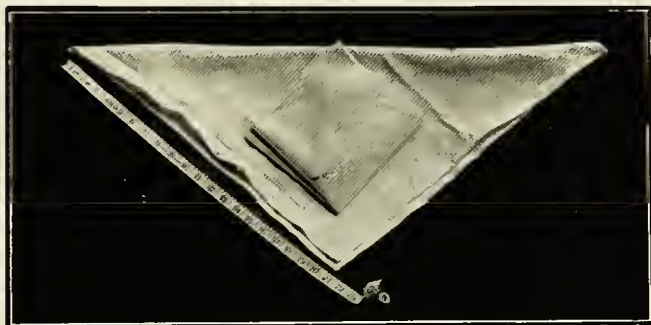
Memo.—A baby's eyes are specially sensitive to light in the first week. At first he opens his eyes only in darkness or shadow, and bears light badly; then he begins to like mild, soft light, and soon benefits by more and more exposure. However, the mother should not strain the baby's eyes by allowing him to lie sleeping or staring up under a white canopy; further, the lining of the pram-hood should always be green. The ideal pram-

A.

B.



A. WEIGHING-MACHINE. B. BABY TOO BIG FOR BASKET!
 Baby should be weighed every week (see pages 28 and 29), and the weight should be marked with a dot on the chart. There should be a steady regular gain in weight after the first week or ten days. Failure to gain in weight is the most reliable evidence of something being wrong or wanting, and the great value of weighing is that it prevents the mother from unwittingly allowing her baby to go downhill.



Napkin with pad of soft old linen or other absorbent material. This is much better than a bulky, cumbersome, hampering napkin, and prevents the urine spreading and chilling the baby (see page 17).



A SIMPLE WAY OF KEEPING MILK COOL.—Two folds of butter-muslin are wetted and thrown over the jug. The moisture is maintained by absorption from the water in the soup-plate. This apparatus must be kept in a cool, airy, outside safe. It acts best in dry weather.



STAGE 4



STAGE 5



STAGE 6



THE CORD AT THE 4th DAY DRIED
AND ALMOST READY TO COME OFF



STAGE 3



STAGE 4



STAGE 6

HOW TO SAFEGUARD THE CORD AND NAVEL.—The stages referred to above are described as numbered on the opposite page. When the cord is treated in this way there is no risk of festering and blood-poisoning, which often happen when the parts are not kept perfectly clean and dry. Further, the use of proper dressings causes the cord to dry, shrivel, and drop off much earlier than when treated otherwise.

[The Author is indebted to the Matrons of St. Helens and Forth Street Maternity Hospitals, Dunedin, for help and facilities in obtaining the above photographs.]

hood is white outside and green inside, and it should admit of free ventilation. An overhanging green tree or shrub affords an admirable shelter in all respects.

CARE OF CORD AND NAVEL.

The simplest and safest way of dealing with the cord is as follows :—

Procure in advance a dusting-powder made up of—

Finely powdered Starch	..	..	3 oz.
Boracic Acid	..	..	3 oz.
Zinc-oxide	..	..	3 oz.

This can be used by means of a pepper-pot. Have also in readiness a supply of soft old linen or cotton which has been perfectly cleansed, boiled, dried, and kept covered. Divide some of the linen into 4 in. squares, cut a hole out of the middle of each square such as would admit the tip of the finger, and cut a line to this from one side of the square. Proceed as follows :—

(1.) Thoroughly cleanse the tied stump of the cord and the adjacent skin with boiled water, or with boracic solution (a level tablespoonful of Boracic Acid to the pint of boiled water).

(2.) Carefully dry the parts by dabbing with a piece of perfectly clean soft old linen which has been boiled, dried, and kept covered away from dirt and dust.

(3.) Take two of the prepared 4 in. linen squares (or similar squares of Surgeon's lint) and place them with the central holes at the navel, the cord protruding through.

(4.) Freely dust the stump of the cord and the exposed surface of the linen with the dusting-powder.

(5.) Fold and wrap the upper square of linen neatly round the cord, which will now lie dressed, safe and snug, on the under square of linen. Finish by neatly folding the under square (see illustration).

(6.) Put on a soft silk and wool or fine flannel binder, thus covering the dressed cord, and securing it in place. The binder should be put on snugly and comfortably, but not tightly; it should be given up as soon as the navel is healed.

CARE OF FORESKIN IN MALE BABIES.

This is another matter which may be considered under the heading of "Cleanliness," and which calls for special attention in the first month of life.

As a rule, the foreskin cannot be drawn back much at first, but day by day the Nurse should be able to draw it further back. This should be a daily routine, followed by washing of the parts. At the end of a week full uncovering of the acorn-like end of the organ should be accomplished, and thenceforward it will be cleansed as a part of the ordinary bathing.

The Nurse should never omit to examine the foreskin the first day, because it may be unduly long, tight, or, even impervious, and so cause retention of the urine. If the Nurse thinks the foreskin is tighter than it should be, or if she can make no headway in drawing it back day by day, she should inform the Doctor, because the operation of Circumcision, which may be needed, is generally best done in the second week of life.

Opinions vary greatly as to the general desirability of Circumcision : the one thing certain is that many ignorant Nurses are far too apt to pronounce the foreskin at fault when it is quite normal, just as they are inclined to regard a normal baby as tongue-tied (see "Tongue-tied Babies," page 26).

SWELLING OF BABY'S BREASTS.

In the case of boys, as well as girls, the breasts often become swollen and painful during the first week or so of life, and may secrete milk. This swelling causes ignorant women to rub and manipulate the breasts, and try to "break them down" as they call it. Any such meddling may cause abscess. Swollen breasts need careful cleansing with boiled water or Boracic lotion, and gentle drying—no handling or rubbing being allowed. Procure some Sterile-gauze or Gamgee-tissue from the chemist, and (immediately after cleansing and drying the parts) apply a small

pad over each breast, keeping the pads in place with muslin bandages.

In all such conditions it is best to get medical aid at once: a Doctor should invariably be consulted if the parts are hot, red, and tender, or if the swelling does not subside in the course of a day or so.

8. SLEEP.

Baby should always sleep in a cradle by himself. A new-born babe should sleep nine-tenths of his time—practically all the time that is not spent in feeding, bathing, &c. Train baby to sleep at regular times, and especially to sleep all night. If baby wakes at night turn him in his cradle, remove wet napkins, cold bottles, &c., make him comfortable, and, if necessary, give him a little warm boiled water to drink. Never give food during the night.

BABY'S FIRST DAYS.

As soon as the mother has settled down comfortably after childbirth, and always in less than twelve hours from the event, baby should be put to the breast, and encouraged to suck for four minutes (two minutes for each breast) at intervals of four hours, to stimulate the secretion of milk. Gradually increase the time allowed for each suckling until at the end of a week or ten days a quarter of an hour or twenty minutes may be taken, if needed. Dont suckle during the night. This gives the mother and child a good eight hours' rest. If baby tends to wake and cry about midnight, or in the early hours of the morning, he may be given a little warm water with a spoon or feeding-bottle, but should have no milk. If treated in this way he will soon give up waking at night.

In the first days of life the infant should suckle both breasts at each meal, but towards the end of the first week strong babies should receive only one breast at each

nursing. (For further advice see "Feeding and Care of Baby," or "What Baby Needs.")

N.B.—At this stage read carefully everything said under the heading **CARE OF THE BREASTS AND SUCKLING**, pages 8 to 13.

Difficulty in Suckling.—If, in spite of being rubbed and drawn out before childbirth, the nipples are still small and flattened, or if baby has difficulty in starting to suck, the following plan may help: With the fingers, squeeze a drop of milk to the surface; then press baby's mouth to the teat, while the Nurse, with lightly oiled fingers of both hands, strokes the breast towards the nipple. Continue daily pulling out, rubbing, and shaping of the teats, or, if they are too sunken for this, try to elongate them before each attempted nursing by applying a Breast-pump, but not using enough suction to actually draw the milk. For a time the baby may have to suck its milk through a Nipple-shield (see illustration), which can be given up as soon as the nipples are sufficiently drawn out and formed for the infant to get hold of them.

The breasts should be kept scrupulously clean. Plain boiled water only need be used for laving the nipples. Dry thoroughly, and cover with small patches of clean absorbent linen or cotton.

Failure of breast-milk is often due to the nurse not putting baby to the breast soon enough after birth, and not persevering long enough.

Usually baby gets almost nothing from the breasts for the first day or two; and he needs almost nothing—he is learning how to suck, and he is teaching the breasts how to secrete milk. However, if during this early period the baby is restless, fretful, and evidently thirsty, boiled water given at blood-heat (about 100° Fahr.), starting with a teaspoonful per feeding, and increased gradually up to a tablespoonful, may be allowed at intervals of four hours—that is, after each attempted suckling. Dont give sugar water.

PATIENCE AND PERSEVERANCE.

With a little more patience and perseverance on the part of the mother during the first few weeks, many babies could be suckled who are now delivered over to the risks and disadvantages of bottle-feeding. Systematic bathing and massaging of the breasts morning and evening, together with regular suckling from the start, will rarely fail to establish a good flow of milk, provided, of course, that due attention is paid to safeguarding the mother, and ensuring proper health and habits.

The reports from the St. Helen's Hospitals and from the Plunket Nurses throughout the Dominion show clearly that in many cases where women have failed in the past to suckle their babies, and have come to regard themselves as incapable of doing so, this failure has been due in reality to lack of attention to the simple laws of health, and want of systematic perseverance in the first few weeks after childbirth. After failing to suckle baby after baby, many women have been taught how to succeed with the latest arrival, sometimes suckling completely, sometimes only partially, but always with great benefit to both mother and child. The mother who nurses her baby is always the better for it.

No ordinary illness of the mother should be regarded as an excuse for giving up nursing. If very ill suckling may have to be stopped for a time, the milk being regularly drawn off. Even where there is abscess of one breast the mother should nurse with the other. Consumption of the mother is almost the only disease that necessitates the abandonment of breast-feeding.

Dont give up trying to establish at least partial breast-feeding for a week or more. Several days or even a week may pass before any milk appears in the breasts, but perfectly regular attempts at nursing should continue to be made at the proper times, because this is the way to stimulate the breasts to set to work and prepare milk ; but, if the mother's milk is delayed beyond about two days, something besides water must be given to the baby (see " Artificial Feeding," page 36).

Suckling should be repeated at four-hour intervals until the end of the second day ; then the period should be shortened to three hours. At first only four minutes should be allowed for each nursing, the time being gradually increased to a quarter of an hour or twenty minutes if needed at the end of a week or ten days.

Never feed during the night—that is, between, say, 10 p.m. and 6 a.m.—the precise hours selected being decided by the convenience of the mother and household. Thus, so long as the same hours are strictly adhered to every day, it makes practically no difference to the baby if, instead of the above time, the mother sleeps from 9 p.m. to 5 a.m. or 11 p.m. to 7 a.m., or she may prefer a seven-hours interval—say, 11 p.m. to 6 a.m.

If baby cries in the night he may be allowed some boiled water, but no milk.

TONGUE-TIED BABIES.

In nine cases out of ten where the mother or Nurse forms the idea that baby is “ tongue-tied,” and cannot suck properly on that account, there is in reality nothing whatever wrong with the tongue. Where tongue-tie does really exist, the trouble is a trifling one, which can be set right in a moment by the Doctor, whose opinion alone is to be considered reliable on such a question. Dont allow any one else to interfere.

OVERFEEDING, BOLTING, ETC.

If baby has indigestion, wind, or putting up of milk, it is generally due to bolting his food, or else to his getting too much in the twenty-four hours, or to both these causes. The supply can be regulated by gently squeezing the base of the nipple between the fingers ; also by allowing him to suck for a shorter period, and if necessary, by momentarily withdrawing the teat from time to time. The time taken at each nursing should

be about a quarter of an hour or twenty minutes—never less than ten minutes, and on no account more than half an hour. If the feedings have been more frequent than every three hours, extend the intervals at once.

Dont imagine that because a baby is fretful and restless, and seems to crave for food, that therefore he ought to be fed to pacify him. The overfed baby often craves for food simply because overfeeding or feeding too often or irregular feeding have given him indigestion: though feeding may relieve him at the moment, his indigestion will be made worse.

Never give a baby food merely to pacify him or to stop his crying; it will damage him in the long run. Feed only at the proper feeding-times. (See Feeding-table.)

One of the most injurious mistakes liable to be made by the young mother, whether she is suckling or feeding artificially, is pacifying of the baby, if he cries during the night, by giving him either the breast or a bottle-feeding. All that needs to be done, as a rule, is to change the napkins, make the bed comfortable, and turn baby on to his opposite side, or otherwise alter his position. If this does not suffice, a tablespoonful or more of warm boiled water may be given, and he will fall off to sleep just as readily as if fed, but with the following important difference: if fed in the night a baby takes less food next day, and therefore tends to wake up hungry the following night, not so if given only water. A baby wont wake up night after night for mere water: after a few lessons, at most, the baby gets into the habit of taking all it needs in the daytime, and the happy result is quiet and peaceful nights for both mother and child.

MOTHER'S MILK.

Mother's milk, especially what is secreted first, is much thinner looking than cow's milk; indeed, human milk looks more like whey. This fact sometimes causes

mothers to believe their milk is poor in quality : therefore, even when there is an abundant flow, they often wean the baby, especially if he happens to be fretful, and suffering from indigestion—this very fretfulness and indigestion being usually due to too much rather than to too little food.

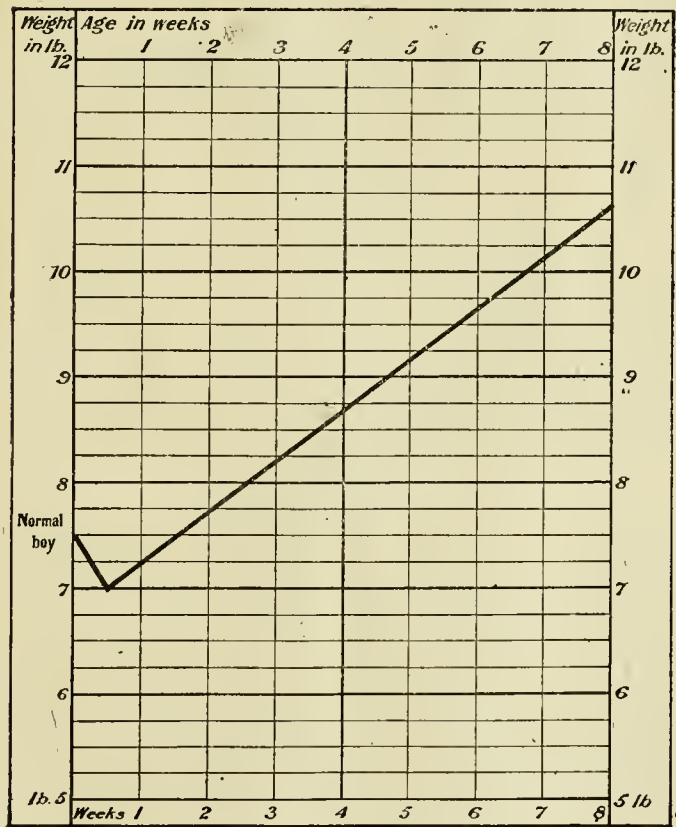
Never wean a baby merely because you think your milk is not agreeing with him. Make quite sure, reform your habits, feed baby regularly with proper intervals between feedings and **weigh him immediately before and immediately after each suckling for a period of twenty-four hours.** This is the only means of finding out what he is getting. If the supply is insufficient the baby should not be weaned, but after each suckling he should be bottle-fed with the quantity of properly graded humanized milk needed to make up the deficiency. On no account should the mother omit one of her breast-feedings and give a bottle instead, because this tends to dry up her milk-supply. If, on the other hand, she supplements after each suckling with the right quantity of Humanized Milk, and takes proper care of herself, the tendency will be for her own supply to increase, until she may be able to breast-feed entirely. **Every drop of Mother's Milk is precious to the baby, especially during the first months of life.** (The question of "supplementing," and how to set about weighing the baby before and after suckling, is fully explained in "Feeding and Care of Baby," and in "What Baby Needs.")

WEEKLY WEIGHING.

Baby ought to be weighed regularly every week to find out whether proper growth is taking place. In the first three days baby usually loses about half a pound, then he begins to gain, and at the end of ten days he should be about the same weight as at birth. During the third and fourth weeks a strong, healthy, breast-fed baby should gain about an ounce a day—say, half a pound a week. For a bottle-fed baby a quarter of a pound a week would be a fair gain at

this time, because in the case of artificial feeding a child tends to take longer to get into his proper stride. This is one of the reasons for leaving no stone unturned to secure the baby every drop of mother's milk during the first month or so. For strong, perfect building and robust health mother's milk is precious all through ; but, so far as mere putting on of weight is concerned, a bottle-fed baby a few months old may go ahead as quickly as one who is suckled.

WEIGHT CHART.



The diagonal line shows average weight for boys. Girls average 5 oz. less.

The normal rate of increase for breast-fed boys is shown by the diagonal black line in the Weight Chart. The weight of girls averages rather less. Mothers are advised to mark baby's weight on the chart, and compare it with the normal line.

DUMMY, COMFORTER, PACIFIER, OR SOOTHER.

The iniquitous and filthy contrivance known by the above names should never be introduced into any home. Dummies deform and otherwise damage the mouth and jaws, spoil digestion, and tend to cause Thrush, Diarrhœa, Colic, and Adenoids.

PATENT FOODS, SOOTHING-POWDERS, ETC.

Never give a baby Drugs, Soothing Powders or Syrups, Patent Medicines or Patent Foods, unless ordered by a Doctor.

THE BOWELS.

During the first day or two the motions are a dark greenish-brown colour. After that they should gradually become golden-yellow, soft, and smooth. There should be from two to four motions a day in the first week, and afterwards one or two daily. Motions should be carefully watched for curds or other signs of indigestion, and for greenness or slime, which may point to diarrhœa. On the first sign of trouble lessen the quantity of food, or give boiled water only, for one or two meals. If this is done, don't forget to draw off the mother's milk with a Breast-pump at the usual feeding-times; also bathe and massage the breasts so as to stimulate them, and thus keep up proper secretion of milk.

If babies are bottle-fed the bowels need special attention, because they always tend to be bound so long as the milk is much below the full strength. If a baby is suckled it tends to have from two to four motions a day in the first week, but if bottle-fed there are rarely more than one or two motions.

“PUTTING UP OF FOOD” AND VOMITING.

Where a baby is suffering from any illness, a Doctor should always be consulted. However, the simple “putting up” of food just after feeding is usually due merely to the infant being given too much food, through being fed too often, or being allowed to suck too rapidly and greedily without interruption, or the milk may be too rich.

This condition may be treated,—

- (1.) By removing the baby from the breast at intervals of two or three minutes during the suckling ;
- (2.) The nursing intervals may be lengthened ;
- (3.) The time at the breast may be shortened.

If these various measures do not suffice, a tablespoonful of boiled water may be given in a feeding-bottle before each nursing, and the mother’s diet may be reduced and her health improved by exercise, outing, &c.

The presence of much curd in the stools is generally an evidence that a baby is getting too much food.

Where there is real Vomiting call in a Doctor. The treatment is generally on the lines given below for Diarrhœa. In the case of “bottle-feeding,” besides giving plain water or diluting the milk, it is sometimes found that the main thing needed is to lessen the amount of sugar or fat. If Humanized Milk diluted with Sugar-of-milk Solution is being used, try diluting with boiled water instead.

DIARRHOEA.

Diarrhœa is very fatal to babies. It is specially a disease of bottle-fed infants, and is rare in the breast-fed : it would be still rarer if strict attention were paid to insuring perfect cleanliness of the breasts. On the first signs of Diarrhœa (green motions, purging, vomiting, &c.) give a small teaspoonful of castor-oil, and withhold all milk, even Mother’s Milk, giving boiled water only. When Mother’s Milk is withheld, draw it off, and attend to the breasts, as instructed under section “The Bowels” (above). After giving boiled water only for twelve hours

or more, breast-feeding for a few minutes may be tried, after baby has had an ounce or two of boiled water. If all goes well, full breast-feeding may be gradually and cautiously resumed. But if diarrhœa persists the mother's milk must be stopped for a few days and whey may be given in the meantime. Whey tends to be slightly laxative, but it often agrees well in the early stages of convalescence from diarrhœa, if milk which has been boiled for ten minutes is added, starting with a tablespoonful per pint the first day and increasing step by step a tablespoonful a day until four tablespoonfuls (that is, 3 oz.) is reached. Then a gradual return may be made to breast-feeding, or in the case of a bottle-fed baby to Humanized Milk. Call in the Doctor at once. (For further information see "Feeding and Care of Baby," or 'What Baby Needs.')

CONSTIPATION.

In every case where a breast-fed baby is constipated the first necessity is perfect regulation of the mother's bowels and general health—proper diet and exercise being of prime importance. If the mother's bowels are perfectly regular, breast-fed babies rarely suffer from constipation, provided all the simple essentials for health are attended to.

Artificially-fed babies generally suffer more or less from constipation in the first month, but this tends to disappear as the food approaches full strength.

If there is marked constipation fluid magnesia may be partially, or if necessary completely, substituted for lime-water in preparing the Humanized Milk for a week or two. (For further details, see "Feeding and Care of Baby," or "What Baby Needs.")

WIND AND COLIC.

Colic or windy spasm is very common in the first month of life, even in breast-fed babies; indeed, it is the commonest trouble of early infancy. It is generally as-

sociated with indigestion, chilling, &c., and may be overcome by due attention to the dietary of mother and child, regularity, proper clothing, and the other simple needs for health.

Colic manifests itself in every degree of disturbance from mere peevishness and fretfulness to severe and intensely painful attacks in which restlessness passes into grunting, writhing, and kicking; the forehead becomes puckered and the face has an agonized expression; the baby tends to scream violently and draws his thighs up against his belly, which will usually be found to be hard and more or less swollen.

CAUSES.

Overfeeding.—Babies often get “wind” from being overfed, or fed too frequently, or from bolting food. Prevent too rapid feeding. Allow an interval of three hours from the beginning of one feeding until the beginning of the next, and don't feed in the middle of the night. If wind still persists, don't allow baby to suckle so long, or further lengthen the intervals. It is sometimes desirable to temporarily dilute the mother's milk by giving baby a teaspoonful or so of warm boiled water before each suckling.

Underfeeding.—More rarely Colic is associated with Underfeeding; therefore, if there is any doubt, weigh baby before and after suckling, and supplement if necessary. (See “Feeding and Care of Baby,” or “What Baby Needs.”)

Chilling.—Colic is sometimes caused by careless exposure of the surface of the body, especially where babies have been coddled. Cold feet, wet napkins, dawdling at the bath, &c., are all liable to cause wind.

Mother's Habits.—The mother's habits are often at fault; she is perhaps taking improper food and insufficient exercise; or perhaps she is “worrying.”

Cleanliness.—If artificially fed, in addition to the above, milk, feeding-bottles, teats, and all utensils should

receive careful attention. See that the food is given at the proper temperature—100° Fahr. The heat of the milk can be fairly maintained by keeping the feeding-bottle in a flannel bag.

TREATMENT OF ATTACK.

A teaspoonful of warm water, or dill water, with or without a tiny pinch of baking soda or a drop of Sal Volatile, will often relieve an attack, but anything beyond warm water, if repeated often, is liable to act prejudicially on digestion. Baby may be turned over on his stomach on the mother's knees and patted on the back; but some mothers prefer holding the baby up against the chest, and firmly and gently patting and pressing his back. This plan is handy and effective where the baby has a strong tendency to accumulate wind while suckling. In such cases the mother merely needs to pause in the middle of nursing and help baby to dislodge the wind as described, and thus prevent its leading to discomfort and vomiting.

The most effective of all measures for a severe attack of Colic in a young baby is an enema of 2 oz. of salt and water (about a teaspoonful of salt to the pint of water) given at a temperature of 105° Fahr., a pad of hot flannel being applied to the belly at the same time.

THRUSH.

Thrush is a condition due to colonies of fungus microbes which establish themselves in the mouth, and cause white patches, which are sore, bleed readily, and tend to spread and form other patches. There should never be any delay in calling in a Doctor, not only because Thrush is readily cured by proper treatment, but because it is often a sign that the baby's health is otherwise upset, and needs special attention. Further, what the mother assumes to be Thrush may really be some other condition, needing very different treatment.

Though Thrush is common, it is an easily preventible condition, and would practically never arise if due attention were paid to the simple essentials for health.

Never wipe out a healthy baby's mouth either before or after feeding: the saliva will cleanse it sufficiently. Wiping out the mouth is liable to cause abrasions, or even ulcers, and may introduce germs, and cause Thrush. **Avoid long-tube feeder and dummy.** Cane-sugar and Condensed Milk must not be used.

If baby has developed Thrush, besides attending to the general health, the mother or Nurse must gently and carefully wash out the baby's mouth after every feeding with a solution made by adding a drachm of Boracic Acid and half an ounce of glycerine to quarter of a pint (5 oz.) of boiling water. Use a tiny swab made by twisting a bit of pure absorbent cotton-wool round the top of a wooden toothpick or other slender piece of clean wood. With this swab cleanse the folds between the gums and lips and cheeks.

CONVULSIONS.

Convulsions would rarely occur if the mother would build her infant strong and resistive to disease by paying due attention to all the essentials for baby's health.

The cause is generally Indigestion, which may lead first to Colic and then to Convulsions.

The first forerunners of Convulsions are commonly squinting, rolling of eyeballs, twitching of fingers, jerking the thumbs into the palms, and jerking the limbs, stiffening the neck, throwing back the head, &c. Send for the Doctor at once.

Give an enema of 2 oz. of warm water (about 105° Fahr. is best); and, as soon as baby can swallow, a small teaspoonful of Castor-oil.

Put baby into a warm bath at 100° Fahr. prepared by adding a dessert-spoonful of mustard to the gallon of water. If no thermometer is at hand the bath

should be as warm as can be comfortably borne by the elbow. Cold cloths should be applied to the head.

After the bath, waste no time—wrap baby up at once in a warm Turkish towel, and dry rapidly. Slip on warmed clothing, and tuck up cosily in a warmed bed.

ARTIFICIAL FEEDING.

Before dealing with Artificial Feeding we must repeat emphatically that Natural Milk drawn by the baby direct from the mother's breast, pure, fresh, living, and blood-warm, is his birthright, and no other form of nourishment can ever equal it. Therefore, every mother should do her utmost to provide sufficient good wholesome Natural Milk for her infant; and if she cannot supply enough she must supply what Breast-milk she can. (See Supplementing," page 28.)

Fortunately for the babies who are deprived of their birthright, we are now able to modify Cow's Milk in a simple way and thus make it very like Mother's Milk. Babies fed on this so-called "Humanized Milk" thrive and look practically as well as those naturally fed, provided the other essentials for health are also attended to; but, whatever may be the appearances, the "suckled baby" always has the advantage over the "Bottle-fed." Breast-feeding tends to build sounder and healthier children.

RECIPE I.—HUMANIZED MILK.

Top Milk (from 27 oz. of New Milk which has been set for from four to seven hours, see next page)	..	6 $\frac{3}{4}$ oz.
Whey (which must have been heated to 155° Fahr.)	.. ..	8 oz.
Lime Water	..	1 oz.
Sugar of Milk	.. ..	$\frac{2}{3}$ oz.
Boiled Water	..	4 $\frac{1}{4}$ oz.

For the first week of life set the milk for only four hours ; for the second week five hours ; for the third week six hours. For use after the third week, set for seven hours, except in very hot weather, when five or six hours is safer.

N.B.—Always heat the Whey to 155° Fahr., to kill the rennet, before mixing the Whey with the other ingredients. If this is not done the Humanized Milk will curdle. If the Whey is not clear, strain it through perfectly clean boiled muslin. The Sugar of Milk dissolves in the water, and does not add to the total quantity. To get two-thirds of an ounce of Sugar of Milk, put an ounce on a paper, smooth it, and make into a neat compact square, divide this into three equal parts, and take two of them.

Method of Preparation.—Take 27 oz. of New Milk (milk from a mixed herd is better than the milk of one cow ; if the milk is very rich, say Jersey milk, a fourth less should be set, say 20 oz. instead of 27 oz.) ; cool quickly in running water, and set, loosely covered, in a cool outside safe for from four to seven hours (see above). In hot summer weather set for five hours or even less. At the end of that time have on the range a kettle of boiling water and a saucepan half full of boiling water. Have in readiness—

The jug of milk which has been set.

Sugar of Milk.

Lime Water.

Rennet.

A half-pint conical graduated measure.

A dairy thermometer.

Two jugs, a tea-cup, a knife, fork, tablespoon, and teaspoon.

All utensils should be perfectly cleansed and covered.

Now pour, skim, or dip off the top 6 $\frac{3}{4}$ oz. from the 27 oz., set, into one of the empty jugs.

To get 8 oz. of Whey, pour 12 oz. of the remaining milk into the other jug, put in the thermometer, and stand the jug in the saucepan of boiling water till the milk registers 105° Fahr. Take the jug from the pan. Stir in a small teaspoonful of rennet, and leave till the curd is firmly set. Then break up curd thoroughly with fork. Replace jug in saucepan, and heat to 155° Fahr. Keep about that temperature for five minutes.

While the Whey is heating, dissolve the Sugar of Milk in half a tea-cup of Boiling Water, and when slightly cooled pour it into the measure and make up to 4¼ oz. Add 10z. of Lime Water, and pour the whole into the jug containing the Top Milk. By this time the Whey will be ready. Pour off 8 oz. of the Whey, straining it through a perfectly clean boiled strainer, and mix it with the other ingredients. Stand the jug of mixture in the saucepan, and heat to 155° Fahr. Keep about that temperature for ten minutes. Cool down rapidly in running water, and keep cool and loosely covered in an outside safe.

The above mixture contains the natural food-elements in the same proportions as they occur in Mother's Milk, and (although not quite so digestible as Mother's Milk) it is the best substitute. The whole work of preparation does not take longer than twenty minutes, and the mother can attend to other household matters while the milk is heating up.

If any mother grudges the trouble involved, she may prepare Humanized Milk No. 2, which is very much better than the common milk and water mixtures sweetened with cane-sugar; but for a young infant, it is not so good as Recipe 1—namely, Humanized Milk made with Whey.

RECIPE 2.—HUMANIZED MILK, No. 2.

Top Milk (from 27 oz. of New Milk which has been set for from four to seven hours, see page 37)	..	9 oz.
Lime Water	.. ..	1 oz.
Sugar of Milk	.. ..	1 oz.
Boiled Water	.. ..	10 oz.

Set the 27 oz. of New Milk for from four to seven hours (see page 37); then remove the top 9 oz. Dissolve the Sugar of Milk in a cup of Boiling Water, and when cool enough pour into the measure and make up to 10 oz. Add this and 1 oz. of Lime Water to the Top Milk. Heat all together to 155° Fahr. Cool down quickly in running water, and keep cool and loosely covered in an outside safe.

NOTE.—When preparing Humanized Milk it is an advantage to have a “conical dipper” to remove the Top Milk, and a “sugar-measure” made to contain exactly half an ounce of Sugar of Milk, when filled level by dipping-up full and then removing the excess with the back of a knife. Tablespoons vary so greatly in size that it is unsafe to use them as measures, unless they have been specially tested.

RECIPE 3.—SUGAR-OF-MILK SOLUTION.

Sugar of Milk	.. ..	$\frac{1}{2}$ oz.
Boiling Water	.. ..	1 pint.

Cool quickly, cover loosely, and keep in a cool outside safe.

As Humanized Milk has to be diluted with Sugar-of-milk Solution during the first month (see Feeding-table) it is best to mix the two together in the proper proportion for the twenty-four-hours supply.

The following tables give the ingredients for various quantities of Humanized Milk.

TABLE OF QUANTITIES FOR HUMANIZED MILK.

	oz.	oz.	oz.	oz.	oz.	oz.
Humanized Milk to be prepared	5	10	15	20	25	30
New Milk to be set for from four to seven hours	7	13	20	27	33	40
Top Milk, to be dipped off the New Milk set	1 $\frac{3}{4}$	3 $\frac{1}{2}$	5 $\frac{1}{4}$	6 $\frac{3}{4}$	8 $\frac{1}{2}$	10
Whey (which must have been heated to 155° Fahr.)	2	4	6	8	10	12
Lime Water ..	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$
Sugar of Milk ..	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{5}{6}$	1
Boiled Water ..	1	2	3	4 $\frac{1}{4}$	5 $\frac{1}{4}$	6 $\frac{1}{2}$

QUANTITIES FOR HUMANIZED MILK, No. II.

	oz.	oz.	oz.	oz.	oz.	oz.
Humanized Milk to be prepared	5	10	15	20	25	30
New Milk to be set for from four to seven hours	7	13	20	27	33	40
Top Milk, to be dipped off the New Milk set	2 $\frac{1}{4}$	4 $\frac{1}{2}$	6 $\frac{1}{2}$	9	11	13
Lime Water ..	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$
Sugar of Milk ..	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$
Boiled Water ..	2 $\frac{1}{2}$	5	7 $\frac{3}{4}$	10	12 $\frac{3}{4}$	15 $\frac{1}{2}$

Warning.—Never set more than the quantity of milk recommended, because nothing is more liable to give a baby indigestion and diarrhoea than too much fat.

ARTIFICIAL FEEDING IN FIRST MONTH.

The Nurse must on no account give up trying to establish at least partial breast-feeding for a week or more, but if the mother's milk is delayed beyond two days, something more than water must be used.

Start with a mixture of one part of Humanized Milk (Recipe 1), three parts of Sugar-of-milk Solution (Recipe 3), and three parts of Boiled Water. Diminish the Boiled Water at each successive feeding, so that by the middle of the third day baby may have one part of Humanized Milk to three parts of Sugar Solution. Then feed by the Table for Feeding, page 42. Strengthen the food day by day, so that on the seventh day baby may receive equal parts of Humanized Milk and Sugar-of-milk Solution; by the beginning of the third week two parts of Humanized Milk to one of Sugar Solution; by the fourth week, three to one; and at the end of the fourth week, four to one. If baby is premature, use food weaker than above.

CHANGING TO HUMANIZED MILK.

Although Humanized Milk has the same strength as Human Milk it is not identical, and a baby should never be given full strength to start with.

Note that no baby should suddenly be given the proportions of Humanized Milk and Sugar Solution set out in the Table for Feeding. Thus, if completely weaned at a fortnight, baby should not start with 14 oz. of Humanized Milk and 7 oz. of Sugar Solution, but with a much weaker mixture—say, 5 oz. of Humanized Milk and 16 oz. of Sugar Solution. Increase the Humanized Milk by 2 oz. a day, and decrease the Sugar Solution the same amount, until on the third day from starting baby is getting 9 oz. of Humanized Milk and 12 oz. of Sugar Solution. After that increase Humanized Milk and decrease Sugar Solution by 1 oz. daily until the proportions in table are reached.

At the same time the total quantity must be increased as set forth in Feeding-table.

TABLE FOR FEEDING.

Average Weight of Baby.	Age of Baby.	Number of Feedings.	Ounces at each Feeding.	Total Ounces in Twenty-four Hours.	Composition of Food.		Interval in Hours.	Hours of Feeding.
					Humanized Milk, Recipe 1.	Sugar Solution, Recipe 3.		
7 lb	Third day	6	1	6	1½	4½	3	6, 9, 12 noon, 3, 6, 10 p.m
..	Fourth day	6	1½	9	3	6	3	Ditto.
..	Fifth day	6	2	12	5	7	3	..
7¼ lb.	Seventh day	6	2½	15	7½	7½	3	..
7½ lb.	Tenth day	6	3	18	11	7	3	..
..	Beginning of third week	6	3½	21	14	7	3	..
..	Beginning of fourth week	6	4	24	18	6	3	..
8¾ lb.	Beginning of second month	6	4¼	25½	21½	4	3	..

The average weight of a baby at birth is 7½ lb., but he loses about ½ lb. in the first three days.

N.B.—No feeding-table can be an absolute guide as to the quantity and strength of food needed for a given baby. No infant needs milk stronger than shown in Table; but for a time (especially in the first month) infants with a tendency to weak digestion thrive better if the food specified is lessened by one or more teaspoon-

fuls per feeding, boiled water being added to dilute and make up quantity.

The composition and quantities given in the above table do not apply when any baby previously fed otherwise is to be put on to Humanized Milk. Always dilute when starting with the new food, as shown in the section Changing to Humanized Milk, page 41.

Premature babies should begin with food more diluted than above, and the advance in strength must be cautious.

FEEDING BABY.

Whenever milk stands for a short time most of the cream rises to the top. Therefore, when feeding-time comes round, always stir the prepared milk well with a clean spoon, then pour the required quantity into a perfectly clean feeding-bottle. Stand the feeder in hot water until the milk registers 100° Fahr., then put the feeder into a little flannel bag to keep the milk warm. The smaller the hole in the teat the better, provided baby can be induced to take his meal in about twenty minutes. This can only be done by holding the feeder and keeping a certain pull on it, so that the teat is kept towards the front of the mouth; move the teat about in the mouth from time to time, and you will find that baby will suck much more actively.

FEEDING BOTTLES AND TEATS.

The feeding-bottles should be simple and easily cleansed, and the teats should be readily turned outside in. Immediately after use rinse the feeding-bottle with cold water, then wash with hot water and soda, and rinse with clean boiled water. Bake or boil, and keep it turned upside down or covered till again required.

Wash the teats immediately after use with cold water: rub with dry common salt outside and inside

to remove slime, &c.: rinse with clean boiled water and shake off surface water; then put the teat, loosely covered with clean paper, in a warm dry place. When dry put the teat away in a covered jar or box. If thus treated, scalding (effected by pouring boiling water over the cleansed teat, and keeping it soaking for a minute) once a day suffices. Frequent or prolonged soaking, especially in boiling water, causes teats to perish very quickly.

The feeding-bottle must on no account have a long tube.

DONT.

DONT give the new-born babe Castor-oil, or any other purgative. Nature supplies what is needed.

DONT resort to bottle-feeding unless obliged. In any case the mother should supply what she can from the breast, up to nine months, if it is only an ounce or two a day.

DONT feed baby more frequently than six times in the twenty-four hours.

DONT allow a shorter interval than three hours between the beginning of one feeding and the beginning of the next.

DONT feed baby in the middle of the night.

DONT wean because your milk looks thin and poor, and seems to disagree and to make baby fretful. The common cause of such symptoms is indigestion, due to baby being fed irregularly, or too rapidly; or he may lack some of the other essentials for health.

DONT omit to weigh baby once a week and note whether he is growing properly.

DONT give Humanized Milk of full strength when starting to use it, and never omit to stir milk thoroughly before pouring out the quantity for feeding.

DONT make sudden changes. An exception is the immediate change to boiled water on account of severe indigestion or diarrhœa.

DONT allow 10 o'clock in the morning to pass without getting the bowels to move, if there has not been a motion in the previous twenty-four hours.

DONT keep baby's milk warmed ready for use, as mothers sometimes do at night, or when travelling or picnicking. This is a most dangerous practice, as microbes increase with fearful rapidity in blood-warm fluids.

DONT keep baby's milk inside the house, but in an outside safe or airy box.

DONT use a comforter.

DONT wipe out baby's mouth. It tends to cause Ulcers and Thrush.

DONT use a tube-feeding bottle. Never omit perfect care and cleansing of feeder and teat.

DONT use Patent Foods, Soothing Syrups or Powders.

DONT keep baby in a warm stuffy room, and then blame pure air because he "catches cold" when taken out.

DONT cover baby's face—not even with the flimsiest lace handkerchief.

DONT rock baby to sleep.

DONT take baby to bed with you.

DONT neglect a crying baby; the cause may be discomfort due to a wet napkin or a pin, or he may be thirsty or ill. If thirsty he should be given some warm boiled water, but never milk or food of any kind, unless it is the proper feeding-time.

DONT allow any one to ill-use baby by working at the breasts with a view to "breaking them down" or "setting the nipple-strings right." This absurd and cruel practice, sometimes resorted to by ignorant women, may give rise to abscess, and is a common cause of flat nipples and inability to suckle in after-life.

THE END.



Accession no.

King, Frederic

Author

Baby's first

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